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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/728,868	12/08/2003	Shyan Bob Shen	MR2049-452	1175
4586	7590	11/29/2005	EXAMINER	
ROSENBERG, KLEIN & LEE 3458 ELLICOTT CENTER DRIVE-SUITE 101 ELLICOTT CITY, MD 21043			MAYES, MELVIN C	
			ART UNIT	PAPER NUMBER
			1734	

DATE MAILED: 11/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/728,868

Applicant(s)

SHEN ET AL.

Examiner

Melvin Curtis Mayes

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

(1)

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

(2)

Claims 3 and 8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 3 claims “artificial fiber (Nomex).” It is not clear if the claim is limited to any artificial fiber or to just artificial fiber made of Nomex. This should be clarified.

Claim 3 contains the trademark/trade name Nomex. Where a trademark or trade name is used in a claim as a limitation to identify or describe a particular material or product, the claim does not comply with the requirements of 35 U.S.C. 112, second paragraph. See *Ex parte Simpson*, 218 USPQ 1020 (Bd. App. 1982). The claim scope is uncertain since the trademark or trade name cannot be used properly to identify any particular material or product. A trademark or trade name is used to identify a source of goods, and not the goods themselves. Thus, a trademark or trade name does not identify or describe the goods associated with the trademark or trade name. In the present case, the trademark/trade name is used to identify/describe artificial fiber and, accordingly, the identification/description is indefinite.

Claim 8 claims “making it partially cured for four hours.” Does this refer to the epoxy? If this refers to the epoxy, does this mean that four hours are used to partially cure the epoxy or that the epoxy is in a partially cured state for four hours before placing onto the core?

Claim 9 claims “glass fiber fabric” and “glass fabric.” This is not consistent.

Claim Rejections - 35 USC § 102

(3)

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(4)

Claims 1-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Bourlier et al. 2002/0106482.

Bourlier et al. disclose a method of making a light transmitting panel comprising: placing adhesive film on both sides of a honeycomb; placing the honeycomb in an oven under pressure; heating to or above the flow temperature of the adhesive films; and cooling. The adhesive films may be composed of a thermoplastic urethane film (thermoplastic polyurethane) of thickness of 0.005 inches (0.127 mm) or aliphatic polyetherurethane (thermoplastic polyurethane) having a melting point of 325-375°F and thickness of 0.005 inches (0.127 mm), and the honeycomb may comprise an aluminum honeycomb material. The adhesive film having a melting point between 325 and 375°F is heated to 325°F (163°C) which is somewhat above the

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flow temperature, for about 30 minutes. Before or after placing the adhesive films on the honeycomb, outer layers of fiberglass-reinforced polyester (glass fiber tissue) are adhered to the adhesive films ([0014]-Claim 7).

(5)

Claims 1, 4 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Hudson 4,249,976.

Hudson discloses a method of making a honeycomb sandwich comprising: placing a layer of thermoplastic adhesive 19 between skin panels 15, 17 and a honeycomb core 13; raising the temperature to 345-375°F (174-191°C) from 0.2 to 2 hours (12-180 minutes) to soften the adhesive; applying low pressure to insure sufficient bonding; and cooling. The skin panels can be comprised of fiberglass cloth (glass fiber tissue) (col. 2, line 65 - col. 6).

Claim Rejections - 35 USC § 103

(6)

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

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2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

(7)

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Santiso, III et al. 5,034,256 in view of JP 6-190955.

Santiso, III et al. disclose a method for making a honeycomb core composite comprising: providing a honeycomb core; placing composite panels on the upper and lower surfaces of the honeycomb; and vacuum bagging the composite and exposing to elevated temperature and pressure to fully cure the assembly, typically pressure of 10 psi to 100 psi. The composite panels can be fiber-reinforced resin impregnated panels such as fiberglass cloth impregnated with epoxy resin (col. 2-4). Santiso, III et al. do not specifically disclose partially curing the epoxy resin for four hours before placing the panels on the honeycomb core.

JP 6-190955 teaches that in making a honeycomb sandwich panel having surface plates using prepregs of glass fiber fabrics reinforced epoxy, before placing the prepregs on the honeycomb for vacuum bag curing, the glass fiber fabrics infiltrated with the epoxy resin are

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subjected to curing for 300 minutes to cure to B-stage (partially cured) to increase viscosity to prevent the generation of voids and resin defects in the surface plates (Abstract and computer translation).

It would have been obvious to one of ordinary skill in the art to have modified the method of Santiso, III et al. for making a honeycomb core composite by partially curing the epoxy resin in the impregnated fiberglass cloths before placing on the honeycomb, as taught by JP 6-190955, to increase the viscosity of the epoxy to prevent the generation of voids and resin defects in the composite panels. Partially curing the epoxy for four hours, as claimed, would have been obvious to one of ordinary skill in the art because JP '955 teaches curing the epoxy to B-stage for 300 minutes (5 hours). By curing to B-stage for 5 hours, the epoxy is partially cured for four hours, as claimed.

Conclusion

(8)

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.


The references disclose making honeycomb core composites.

(9)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melvin Curtis Mayes whose telephone number is 571-272-1234. The examiner can normally be reached on Mon-Fri 7:30 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Fiorilla can be reached on 571-272-1187. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Melvin Curtis Mayes
Primary Examiner
Art Unit 1734

MCM
November 22, 2005